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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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1 of 13

Application Number 09/841,809  
Filing Date April 24, 2001  
First Named Inventor Meade, T.  
Group Art Unit Not Yet Assigned  
Examiner Name Not Yet Assigned  
Attorney Docket Number A-64789-3/RFT/RMS/RMK

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## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
re. re.	1	4,707,352		Stavrianopoulos	11/1987	
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	3	4,711,955		Ward et al.	12/1987	
	4	4,755,458		Rabbani et al.	7/1988	
	5	4,840,893		Hill et al.	6/1989	
	6	4,849,513		Smith et al.	7/1989	
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	8	4,894,325		Englehardt et al.	1/1990	
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	10	4,952,685		Stavrianopoulos	8/1990	
	11	4,994,373		Stavrianopoulos	2/1991	
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	14	5,082,830		Brakel et al.	1/1992	
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## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
re. re.	19	EP	0 234 938	A2	Cranfield Inst. of Tech.	2/1987		
re. re.	20	EP	0 229 943	B1	Molecular Biosystems Inc.	7/1987		
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re. re.	25	JP	238,166	A	Mitsubishi Corp.	1988	abstract	
re. re.	26	JP	6-41183	A2	Mitsubishi Corp.	1994		

Examiner Signature	<i>re. re. re. re.</i>	Date Considered	9/9/04
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Application Number 09/841,809  
Filing Date April 24, 2001  
First Named Inventor Meade, T.  
Group Art Unit Not Yet Assigned  
Examiner Name Not Yet Assigned  
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		Number	Kind Code <sup>2</sup> (if known)			
C	27	5,328,824		Ward et al.	7/1994	
	28	5,403,451		Riviello et al.	4/1995	
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		Office <sup>2</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
RE. R.	45	WO	90/05732	A1	Columbia Univ.	5/1990		
RE. R.	46	WO	92/10757	A1	Boehringer Mannheim	6/1992		
—	47	WO	<del>93/22678</del>	A2	<del>Mass. Inst. of Technology</del>	11/1993		
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—	49	WO	<del>94/22889</del>	A1	<del>Cis Bio International</del>	10/1994		
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Examiner Signature	Date Considered
<i>[Signature]</i>	9/9/01

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Filing Date		April 24, 2001	
First Named Inventor		Meade, T.	
Group Art Unit		Not Yet Assigned	
Examiner Name		Not Yet Assigned	
Attorney Docket Number		A-64789-3/RFT/RMS/RMK	

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	53	5,824,473		Meade et al.	10/1998
	54	5,851,772		Mirzabekov et al.	12/1998
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	57	5,795,453		Gilmartin et al.	08/1998
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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)			
	59	WO	97/01646	A2	Univ. of N. Carolina	1/1997	
	60	WO	97/44651	A1	AU Membrane and	11/1997	
	61	WO	97/27329	A1	Univ. of Chicago	7/1997	
	62	WO	98/20162	A2	Clinical Micro Systems	5/1998	
	63	WO	98/27229	A1	Univ. of Chicago	6/1998	
	64	WO	98/28444	A2	Univ. of Chicago	7/1998	
	65	WO	98/35232	A2	Univ. of N. Carolina	8/1998	
	66	WO	99/67425	A2	Clinical Micro Systems	12/1999	
	67	WO	99/14596	A1	AB Sangtec Medical	3/1999	
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	69	EP	0 142 301			05/1985	
	70	WO	97/27473			07/1997	
	71	WO	93/25898			12/1993	

Examiner Signature	<i>[Signature]</i>	Date Considered	9/9/04
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 4 of 13

Application Number 09/841,809  
Filing Date April 24, 2001  
First Named Inventor Meade, T.  
Group Art Unit Not Yet Assigned 1652  
Examiner Name Not Yet Assigned moishipoun  
Attorney Docket Number A-64789-3/RFT/RMS/RMK

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
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R.R.	74	Alleman, K.S., et al., "Electrochemical Rectification at a Monolayer-Modified Electrode," <i>J. Phys. Chem.</i> , 100:17050-17058 (1996).	
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R.R.	85	Bumm, et al., "Are Single Molecular Wires Conducting?," <i>Science</i> 271:1705-1707 (1996).	
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—	87	Carr et al., "Novel Electrochemical Sensors for Neutral Molecules," <i>Chem. Commun.</i> , 1649-1650 (1997).	
—	88	Carter et al., "Voltammetric Studies of the Interaction of Metal Chelates with DNA. 2. Tris-Chelated Complexes of Cobalt(III) and Iron(II) with 10-Phenanthroline and 2,2'-Bipyridine," <i>J. Am. Chem. Soc.</i> , 111:8901-8911 (1989).	

Examiner Signature moishipoun Date Considered 9/9/04

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		Filing Date	April 24, 2001
		First Named Inventor	Meade, T.
		Group Art Unit	Not Yet Assigned 1656
		Examiner Name	Not Yet Assigned Monshipou
Attorney Docket Number	A-64789-3/RFT/RMS/RMK		
Sheet 5	of 13		

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
re.re.	89	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocycytochrome c by Ru(2,2'-bpy) <sub>2</sub> (im)(His-33) <sup>3+</sup> ," <i>J. Am. Chem. Soc.</i> , 113:7056-7057 (1991).	
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Examiner Signature	<i>re.re. Meash</i>	Date Considered	9/9/04
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R.R.	105	Durham, B., et al., "Photoinduced Electron-Transfer Kinetics of Singly Labeled Ruthenium Bis(bipyridin) Dicarboxybipyridine Cytochrome c Derivatives," <i>Biochemistry</i> , 28:8659-8665 (1989).	
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R.R.	121	Hegner, et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions," <i>FEBS</i> 336(3):452-456 (1993).	

Examiner Signature	R.R. Meade	Date Considered	9/9/04
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Substantive for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary) JUL 16 2001			Complete if Known Application Number 09/841,809 Filing Date April 24, 2001 First Named Inventor Meade, T. Group Art Unit Not Yet Assigned 1652 Examiner Name Not Yet Assigned Monshipour Attorney Docket Number A-64789-3/RFT/RMS/RMK	
Sheet 1 of 13				

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number	09/841,809	
		Filing Date	April 24, 2001	
		First Named Inventor	Meade, T.	
		Group Art Unit	<del>Not Yet Assigned</del> 1652	
		Examiner Name	<del>Not Yet Assigned</del> Monshipour	
8	of	13	Attorney Docket Number	A-64789-3/RFT/RMS/RMK

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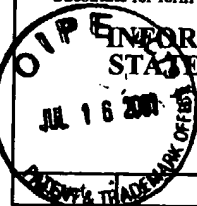
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Application Number	09/841,809
Filing Date	April 24, 2001
First Named Inventor	Meade, T.
Group Art Unit	<del>Not Yet Assigned</del> 1652
Examiner Name	<del>Not Yet Assigned</del> Morshapen
Attorney Docket Number	A-64789-3/RFT/RMS/RMK

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		Group Art Unit	Not Yet Assigned 6052
		Examiner Name	Not Yet Assigned McShane
Attorney Docket Number		A-64789-3/RFT/RMS/RMK	

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re.re.	186	Turro, N., et al. "Photoelectron Transfer Between Molecules Adsorbed in Restricted Spaces," <i>Photochem. Convers. Storage Sol. Energy, Proc. Int. Conf.</i> , 8th, pp 121-139 (1990).	
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re.re.	194	Xu, et al., "Immobilization and Hybridization of DNA on an Aluminum(III) Alkanebisphosphonate Thin Film with Electrogenenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 117:2627-2631 (1995).	
re.re.	195	Xu, et al., "Immobilization of DNA on an Aluminum(III) alkanebisphosphonate Thin Film with Electrogenenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 116:8386-8387 (1994).	
re.re.	196	Yang, et al., "Growth and Characterization of Metal(II) Alkanebisphosphonate Multilayer Thin Films on Gold Surfaces," <i>J. Am. Chem. Soc.</i> , 115:11855-11862 (1993).	
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re.re.	198	Zhou, et al., "Fluorescent Chemosensors Based on Energy Migration in Conjugated Polymers: The Molecular Wire Approach to Increased Sensitivity," <i>J. Am. Chem. Soc.</i> , 117:12593-12602 (1995).	

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				Application Number	09/841,809
				Filing Date	April 24, 2001
				First Named Inventor	Meade, T.
				Group Art Unit	Not Yet Assigned - 1652
				Examiner Name	Not Yet Assigned - Monshipenn
Sheet 1 of 13				Attorney Docket Number	A-64789-3/RFT/RMS/RMK

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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		Filing Date	April 24, 2001
		First Named Inventor	Meade, T.
		Group Art Unit	<del>Not Yet Assigned</del> 1652
		Examiner Name	<del>Not Yet Assigned</del> Morshapone
Attorney Docket Number	A-64789-3/RFT/RMS/RMK		
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		Number	Kind Code <sup>2</sup> (if known)			
re.re.	208	4,945,045		Forrest et al.	07/1990	
	209	5,089,112		Skotheim et al.	02/1992	
	210	5,180,968		Bruckenstein et al.	01/1993	
	211	5,356,786		Heller et al.	10/1994	
	212	5,391,272		O'Daly et al.	02/1995	
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	219	6,087,100		Meade et al.	07/2000	
	220	6,096,273		Kayyem et al.	08/2000	
	221	6,107,080		Lennox	08/2000	
	222	6,177,250		Meade et al.	01/2001	
	223	6,180,352		Meade et al.	01/2001	
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re.re.	225	6,238,870		Meade et al.	05/2001	

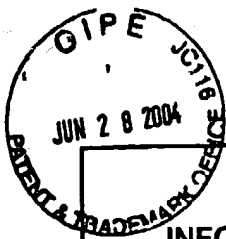
FOREIGN PATENT DOCUMENTS						
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	226	WO	97/41425		11/1997	
	227	WO	86/05815	A1	Genetics International Inc.	3/1985
	228	WO	98/57159	A1	Clinical Micro Systems	6/1997
	229	WO	99/37819	A2	Clinical Micro Systems	1/1998

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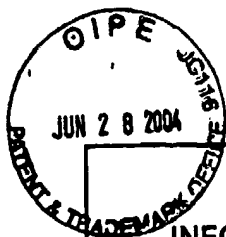
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				Application Number	09/841,809
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				First Named Inventor	Thomas J. MEADE
				Art Unit	1652
				Examiner Name	Monshipouri, Maryam
Sheet	1	of	4	Attorney Docket Number A-64789-3/RFT/RMS/RMK (463037-00104)	

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P.N.	A1	5,238,808	08-24-1993	Bard et al.	
	A2	5,308,754	05-03-1994	Kankare et al.	
	A3	5,532,128	07-02-1996	Eggers et al.	
	A4	5,565,322	10-15-1996	Heller	
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	A17	6,013,459	01-11-2000	Meade	
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	A19	6,048,690	04-11-2000	Heller et al.	
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	A25	6,127,127	10-03-2000	Eckhardt et al.,	
	A26	6,140,045	10-31-2000	Wohlstadter et al.	
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	A28	6,197,515 B1	03-06-2001	Bamdad et al.	
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P.N.	A31	6,248,229 B1	06-19-2001	Meade	

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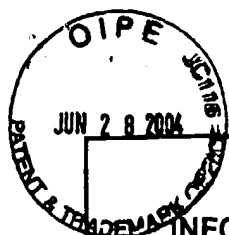
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✓	A32	6,258,545 B1	07-10-2001	Meade et al.	
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	A35	6,277,576 B1	08-21-2001	Meade et al.	
	A36	6,291,188 B1	09-18-2001	Meade et al.	
	A37	6,306,584 B1	10-23-2001	Bamdad	
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	A41	6,395,493 B1	05-28-2002	Sosnowski et al.	
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✓	A51	2004/0101890 A1	05-27-2004	Meade et al.	
	A52				
	A53				

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✓	B1	EP 0478319 B1	04-01-1992	Toshiba		
✓	B2	EP 0668502 B1	05-22-2002	Yissum Research Development		
✓	B3	WO 98/12539 A1	03-26-1998	Meso Scale Technologies, LLC		

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				Application Number	09/841,809
				Filing Date	April 24, 2001
				First Named Inventor	Thomas J. MEADE
				Art Unit	1652
Examiner Name	Monshipouri, Maryam				
Attorney Docket Number	A-64789-3/RFT/RMS/RMK (463037-00104)				
Sheet	3	of	4		

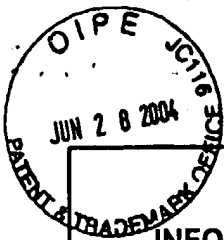
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R.R.	B4	WO 98/31839 A2, A3	07-23-1998	Presidents & Fellows of Harvard College		
R.R.	B5	WO 98/57158 A1	12-17-1998	Clinical Micro Sensors		
—	B6	<del>WO 99/57317 A1</del>	<del>11-11-1999</del>	<del>Clinical Micro Sensors</del>		
—	B7	<del>WO 99/57319 A1</del>	<del>11-11-1999</del>	<del>Clinical Micro Sensors</del>		

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R.R.	C1	BAIN et al., "Formation of Monolayers by the Coadsorption of Thiols on Gold: Variation in the Length of the Alkyl Chain," Journal of the American Chemical Society, 1989, 111:7164-7175.			
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R.R.	C11	LANGEN et al., "Electron Tunneling in Proteins: Coupling Through a $\beta$ Strand," Science, 1995, 268:1733-1735.			
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Sheet	4	of	4	Attorney Docket Number	A-64789-3/RFT/RMS/RMK (463037-00104)

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>4</sup>
re	C12	MUTZ et al., "Conformational dependence of electron transfer across de novo designed metalloproteins," Proceedings of the National Academy of Science USA, 1996, 93:9521-9526.		
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<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English Language Translation is attached.

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